

AMENDMENTS TO THE CLAIMS

Please amend the present application as follows:

Claims

1. (Previously presented) A module, comprising:

a substrate having a first side and a second side, the substrate defining one or more holes from the first side to the second side, the substrate additionally defining a recess located about the hole on the second side; and

a plastic member for mounting to the first side of the substrate, the plastic member comprising a thermoplastic heat stake having a shaped tip selected such that when reformed using heat, the thermoplastic material of the shaped tip forms a lump that is confined inside the recess of the substrate.

2. (Previously presented) A method of forming a surface mount module, the method comprising:

providing a substrate having a first side and a second side;

providing a hole in the substrate from the first side to the second side;

providing a recess about the hole on the second side;

providing a plastic member having a thermoplastic heat stake;

mounting the plastic member on the first side of the substrate, the mounting comprising insertion of the thermoplastic heat stake into the hole in the substrate; and

heating a shaped tip of the thermoplastic heat stake whereby the thermoplastic material of the shaped tip is melted and confined inside the recess of the substrate.

3. (Previously presented) The module of claim 1, wherein the substrate is a printed circuit board (PCB) and the second side of the PCB is substantially planar for configuring the module as a surface mount module.

4. (Previously presented) The module of claim 1, wherein the shaped tip is a barbed tip.

5. (Withdrawn) The module of claim 1, wherein the shaped tip is a tapered tip.

6. (Withdrawn) The module of claim 1, wherein the shaped tip is a straight tip.

7. (Previously presented) The module of claim 1, wherein the recess is a V-shaped recess.

8. (Withdrawn) The module of claim 1, wherein the recess is a U-shaped recess.

9. (Withdrawn) The module of claim 1, wherein the recess comprises a first portion having straight sides and a second portion that is V-shaped.

10. (Withdrawn) The module of claim 1, wherein the recess has a stepped cross section.

11. (Previously presented) The method of claim 2, further comprising:

mounting the surface mount module upon a printed circuit board (PCB) using surface mounting techniques.

12. (Previously presented) The method of claim 2, wherein the shaped tip is selected to have a volume whereby when heated the thermoplastic material of the shaped tip is deformed and confined inside the recess of the substrate.

13. (Previously presented) A module, comprising:

a substrate having a mounting hole extending from a first surface to a second surface, the mounting hole further defined by a recess located in the second surface; and

a component that is mountable upon the first surface of the substrate, the component comprising a thermoplastic heat stake configured for insertion into the mounting hole in the substrate, the thermoplastic heat stake having a tip with a material volume that is selected for deforming under heat to produce a lump that is located, at least in part, inside the recess and is operative to securing the component to the substrate.

14. (Previously presented) The module of claim 13, wherein the lump is wholly confined inside the recess.

15. (Previously presented) The module of claim 14, wherein the second surface is substantially

planar with the lump wholly confined inside the recess so as to provide surface mounting capability to the module.

16. (Previously presented) The module of claim 15, wherein the substrate and the component are parts of an electronic display.
17. (Previously presented) The module of claim 13, wherein the component is at least one of a) a light diffusing element or b) a reflector for reflecting light from a light source mounted on the substrate.
18. (Previously presented) The module of claim 17, wherein the light diffusing element is a plastic light diffusing element.
19. (Previously presented) The module of claim 13, wherein the substrate is a printed circuit board (PCB).
20. (Previously presented) The module of claim 19, wherein the PCB has a thickness approximately 1.6 mm.